Paper No. 31

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte ATSUHITO NODA AND SHIGEYUKI HOSHIKAWA

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Appeal No. 2002-0620
Application No. 08/921,943[1]

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ON BRIEF

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Before HAIRSTON, GROSS and SAADAT, Administrative Patent Judges.
SAADAT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 22-27. Claims 1, 2, 5, 6 and 9 have been cancelled and claims 3, 4, 7, 8 and 10-21 have been allowed by the Examiner.

We reverse.

[1] Application for patent filed August 27, 1997, which claims the foreign filing priority benefit under 35 U.S.C. § 119 of Japanese Applications No. 271793/1996, filed September 20, 1996.

BACKGROUND

Appellants' invention is directed to a connector pin to be press-fitted into a plated through hole of a printed circuit board for making solder-free electrical connection. The pin has an elastically deformable area to be inserted into the through hole as the outer corners of each pin engages the inner walls of the through hole. The deformable area includes a deformable bridge or web which is positioned between two opposite parallel beams (specification, page 5).

Representative independent claim 22 is reproduced as follows:

22. A press-fit pin having an elastically deformable area to be press-fitted in a plated through hole in a printed circuit board, the press-fit pin comprising:

two generally parallel, opposite beams;

a deformable region extending perpendicular to said beams, said deformable region having an upper surface and a lower surface and said deformable region further having opposite ends between said beams;

said upper surface of said deformable region joined to said beams by two oblique sections extending outward and upward from said opposite ends of said upper surface of said deformable region; and

said lower surface of said deformable region joined to said beams by reentrant sections formed at said opposite ends of said lower surface of said deformable region, and opposite sidewalls extending from said reentrant sections generally downward to be contiguous with said opposite beams and whereby said opposite sidewalls are generally parallel to each other.

The following references[2] are relied on by the Examiner:

Japanese Koki Patent Application

Sakuraoka et al. (Sakuraoka) 7-245131 Sep. 19, 1995

German Published Patent Application

Dingenotto DE-OS 4002486 A1 Aug. 8, 1991

Claims 22-24 and 27 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Dingenotto.

Claims 25 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dingenotto in view of Sakuraoka.

We make reference to the answer (Paper No. 26, mailed September 27, 2001) for the Examiner's reasoning, and to the brief (Paper No. 25, filed July 18, 2001) and the reply brief (Paper No. 27, filed January 8, 2002) for Appellants' arguments thereagainst.

OPINION

In rejecting claims 22-24 and 27 under 35 U.S.C. § 102, the Examiner refers to Figure 3 of Dingenotto and equates portions 11 to the claimed parallel beams and sections 33 as the claimed semi-circular reentrant sections (answer, page 3). The Examiner further characterizes regions 22 of Dingenotto as the claimed

[2] Translations of these references (provided by the USPTO Translation Branch) are relied upon and accompany this decision.

opposite sidewalls and asserts that they represent sidewalls that are generally parallel (id.).

Appellants argue that sidewalls 22 of Dingenotto are not generally parallel to each other and, in fact, diverge from each other (brief, page 9, reply brief, page 3). Appellants rely on the dictionary definition of the modifier "generally" as meaning "for the most part"[3] and further argue that the claimed structure, as depicted in Figure 3, has sidewalls that are for the most part parallel to each other (id.).

In response to Appellants' arguments, the Examiner asserts that it is the Examiner's opinion that the sidewalls of the claimed invention, as depicted in Figure 3, are not parallel (answer, page 4). The Examiner further asserts that the sidewalls of Dingenotto appear to extend in the same direction as the sidewalls in Appellants' Figure 3 (id.). The Examiner concludes that if the sidewalls in Appellants' Figure 3 are parallel, then the sidewalls of Dingenotto "could also be deemed as 'generally parallel'" (id.).

A rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference. In re Paulsen, 30 F.3d 1475,

[3] Appellants rely on The American Heritage College Dictionary, Third, Edition, p. 567, a copy of which is attached to the brief as Appendix B.

1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994). See also Atlas Powder Co. v. Ireco Inc., 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999).

We observe that Dingenotto, as depicted in Figure 3, discloses a cross section of the press-fit zone of a contact element having an M-shaped cross section (page 6). The M includes two lateral sides 11 and a connecting web 12 which is connected to the sides through a transitional area including lower edges 22 that form the sidewall portions (page 7). However, Dingenotto neither discloses nor suggests that the lower edges 22 may be generally parallel to each other. In that regard, Dingenotto merely describes the lower edges as circular arcs of larger diameter compared to circular arcs 33 and, in fact, shows that the lower edges have opposite curvature.

We disagree with the Examiner that since the sidewalls in Figure 3 of Appellants are not shown precisely as parallel, the sidewalls of Dingenotto could also be parallel. What a reference teaches is a question of fact. In re Baird, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994) (citing In re Beattie, 974 F.2d 1309, 1311, 24 USPQ2d 1040, 1041 (Fed. Cir. 1992)). Here the examiner has not pointed to, nor do we find, any teaching in the prior art that would disclose or fairly suggest that circular edges 22 may be generally parallel to each other. Accordingly,

we find that the Examiner has failed to meet the burden of providing a prima facie case of anticipation and the 35 U.S.C. § 102 rejection of claims 22-24 and 27 over Dingenotto cannot be sustained.

Turning now to the 35 U.S.C. § 103 rejection of claims 25 and 26, we note that the Examiner further relies on Sakuraoka for teaching the relative position of the reentrant section in relation to the lower surface of the deformable section (answer, page 4). Sakuraoka relates to a press-fit pin having a press-fit area in the form of a bridge between beams 41 and 42 (Figure 1 and pages 15-20). However, since there is no disclosure in the reference relating to opposite sidewalls being generally parallel to each other, the deficiencies of Dingenotto as discussed above with respect to claims 22-24 and 27 cannot be overcome. Accordingly, we do not sustain the 35 U.S.C. § 103 rejection of claims 25 and 26 over Dingenotto and Sakuraoka.

CONCLUSION

In view of the foregoing, the decision of the Examiner to reject claims 22-24 and 27 under 35 U.S.C. § 102 and claims 25 and 26 under 35 U.S.C. § 103 is reversed.

REVERSED

KENNETH W. HAIRSTON Administrative Patent Judge	)
ANITA PELLMAN GROSS Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
MAHSHID D. SAADAT Administrative Patent Judge	)

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